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ABSTRACT

National Assessment of Educational Progress (NAEP) data show that children in grades 4, 8, and 11 whose mothers work outside the home read better than children whose mothers do not work outside the home--but the difference is small. This conclusion represents one segment of the findings of the 1983-84 National Assessment, which focused on reading and writing and was administered to approximately 100,000 students across 30 states, and which for the first time asked students if their mothers worked outside the home. The findings were consistent with previous research studies indicating that children's reading achievements are unaffected by maternal employment alone. Related factors found to affect the reading performance of students included mother's level of education, amount of household income, and early education. Specifically, assessment results indicated that (1) more than half of the students reported their mothers worked outside the home; (2) students with mothers working outside the home performed better in reading, possibly due to the relationship between mothers who work outside the home and traditional socioeconomic advantages, for example, higher education and income; (3) mothers who work outside the home have higher levels of education and students whose parents have more education achieve higher reading scores; and (4) more students whose mothers work outside the home attended nursery school, which is associated with better reading performance. (JD)

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Mothers Working Outside the Home

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Mothers Working Outside the Home:

What Do National Assessment Results Tell Us?

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Report No. 15-R-04

The National Assessment of Educational Progress, The Nation's Report Card, is funded by the Office for Educational Research and Improvement--Center for Statistics, under a grant to Educational Testing Service. National Assessment is an education research project mandated by Congress to collect data over time on the performance of young Americans in various learning areas. It makes information on assessment procedures available to state and local education agencies.

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HIGHLIGHTS

Findings

- More than half the students reported that their mothers worked outside the home.
- Students with mothers working outside the home -- contrary to what many would expect -- performed better in reading, but one should not overlook the relationship between mothers who work outside the home and traditional socioeconomic advantages, for example, higher education and income.
- Mothers who work outside the home have higher levels of education and students whose parents have more education have higher reading scores.
- More students whose mothers work outside the home reported attending nursery school, which is associated with better reading performance.

Conclusions

- NAEP data generally supports previous research studies which have found that maternal employment by itself is neither good nor bad for children.

INTRODUCTION

Today, mothers--whether White, Black or Hispanic, married or single--are working outside the home in large numbers. Maternal employment rates are increasing for all groups. It has long been, and still is, true that the highest employment rates among women are for those who provide the sole support for their families. What has been happening for some time now is that increasing numbers of all women, whether married or not, are combining work and motherhood.

The result is that more children than ever have mothers in the labor force. Indeed, more mothers work outside the home than do not, and it is projected that this trend will continue (Grossman, 1982; U.S. Bureau of the Census, 1980). Research tells us that:

- Over 18 million mothers with children below the age of six work outside the home (Grossman, 1982).
- Close to 40 percent of mothers working outside the home are at work by the time their child is one year old (Kamerman, Kahn, & Kingston, in press).
- In two-parent households, 69 percent of the Black mothers who had school-age children worked outside the home compared with 63 percent of the White mothers and 54 percent of the Hispanic mothers (Hayghe, 1983).
- In households headed by a female, 70 percent of the White mothers who had children under the age of 18 worked outside the home compared with 60 percent of the Black mothers and 48 percent of the Hispanic mothers (Johnson & Waldman, 1983).

- Regardless of race or family type, children from higher income families were more likely to have working mothers (Waldman, Grossman, Hayghe, & Johnson, 1979).

Much research has been conducted on mothers' employment status and its effect on children's educational outcomes. In its comprehensive report, Children of Working Parents (Hayes & Kamerman, 1983), the Panel on Work, Family, and Community of the National Academy of Sciences concluded:

> Existing research offers no evidence that maternal employment by itself is either good or bad for children, or indeed has any distinctive effect. (p. vii)

The National Assessment of Educational Progress (NAEP) provides an important new source of national data on students whose mothers work outside the home. NAEP is an ongoing national survey of the knowledge, skills, understandings, and attitudes of young Americans in the major learning areas usually taught in school. Its primary goals are to detect and report the current status of, as well as changes in, the educational attainments of young Americans and to report long-term trends in those attainments. Results are used by educators, legislators, and others for improving the educational experience of youth in the United States. NAEP is the first national effort to obtain comprehensive and dependable achievement data on a regular basis in a uniform, scientific manner. Funded by the Office for Educational Research and Improvement (OERI), NAEP is administered by Educational Testing Service (ETS) as an activity of its Center for the Assessment of Educational Progress (CAEP).

The focus of the 1983-84 National Assessment was reading and writing. NAEP administered the equivalent of eight assessment booklets, each containing approximately 45 minutes of achievement and background exercises, to separate samples of students at three grade levels: fourth, eighth, and eleventh. These samples were extended to allow reporting for three age groups as well: 9-, 13-, and 17-year-olds. About 1,600 public and nonpublic schools and about 100,000 students in 30 states across four regions were included in the sample.

This background paper describes one segment of the assessment results: the relationship between mothers working outside the home and the reading achievement of their children in grades 4, 8, and 11. Percentages in this report are weighted in accordance with the sample design. Reading achievement is measured by an underlying reading proficiency variable derived through the use of Item Response Theory. Results are reported using a reading proficiency scale that ranges from 0 to 500. Other results, change analyses, and writing achievement are reported elsewhere.

RESULTS FROM THE 1983-84 NATIONAL ASSESSMENT

In 1983-84, for the first time, NAEP asked students if their mothers worked outside the home. It should be noted that although the nonresponse rate was low--2 percent at grades 4 and 8 and 1 percent at grade 11, -- students in grade 4 had trouble comprehending the meaning of "outside the home."

How Many Students Reported Their Mothers Work Outside the Home?

More than half the students at all three grade levels reported that their mothers work outside the home: 56 percent in grade 4, 64 percent in grade 8, and 66 percent in grade 11.

Race/ethnicity. Table 1 presents the percentage of White, Black, and Hispanic students with mothers working outside the home. At grade 4, about the same percentage of White, Black, and Hispanic students reported that their mothers worked outside the home. At the upper grades, proportionally more Black students than White students have mothers working outside the home. Hispanic students in grades 8 and 11 are least likely to have mothers working outside the home.

TABLE 1. Percentage of White, Black, and Hispanic Students with Mothers Working Outside the Home

Grade	White	Black	Hispanic
4	57	55	53
8	64	71	54
11	66	73	54

Mothers' Education. Mothers who work outside the home are more likely to have higher levels of education than those who do not work outside the home (Table 2). It should be noted that many students (more than 40 percent at grade 4) did not know their mothers' level of education.

TABLE 2. Percentage of Students with Mothers Working/Not Working Outside the Home by Mother's Education *

Work Status	No High School Diploma	Graduated High School	Post-high School	Unknown
GRADE 4				
Mothers Working Outside the Home	6	21	33	41
Mothers Not Working Outside the Home	8	22	25	45
GRADE 8				
Mothers Working Outside the Home	12	41	36	11
Mothers Not Working Outside the Home	18	40	26	16
GRADE 11				
Mothers Working Outside the Home	14	41	41	4
Mothers Not Working Outside the Home	24	41	28	7

* Percentages may not total 100 due to rounding.

How Is Mother's Employment Related to Reading Performance?

Students who reported their mothers work outside the home are better readers than those students who reported their mothers do not work outside the home (Table 3). Many people would expect the opposite to be true. Factors other than whether or not the mother is working outside the home affect student performance, and these factors, such as mother's education, must be examined carefully before any conclusion can be drawn.

TABLE 3. Reading Proficiency of Students with Mothers Working/ Not Working Outside the Home *

Grade	Mothers Working Outside	Mothers Not Working Outside
4	220 (0.8)	215 (0.9)
8	262 (0.7)	259 (0.8)
11	290 (0.9)	287 (1.1)

* Reading proficiency is reported using a scale that ranges from 0 to 500. Standard errors are presented in parentheses. It can be said with 95 percent certainty that the reading proficiency of the population of interest is in the interval of the estimated average $\pm$ 2 standard errors.

Race/ethnicity. The pattern of better performance for students whose mothers work outside the home held for students from different racial/ethnic backgrounds. This pattern is more notable for Black and Hispanic students than for White students. Table 4 presents the reading proficiency of White, Black, and Hispanic students whose mothers do or do not work outside the home.

TABLE 4. Reading Proficiency of White, Black, and Hispanic Students with Mothers Working/Not Working Outside the Home *

Work Status	White	Black	Hispanic
GRADE 4			
Mothers Working Outside the Home	226 (1.0)	199 (1.4)	203 (1.6)
Mothers Not Working Outside the Home	223 (1.2)	190 (1.4)	198 (1.8)
GRADE 8			
Mothers Working Outside the Home	267 (0.6)	242 (1.4)	246 (1.8)
Mothers Not Working Outside the Home	265 (1.0)	236 (1.7)	241 (1.6)
GRADE 11			
Mothers Working Outside the Home	297 (0.9)	268 (2.2)	271 (2.5)
Mothers Not Working Outside the Home	294 (1.3)	263 (1.7)	267 (2.3)

* Reading proficiency is reported using a scale that ranges from 0 to 500. Standard errors are presented in parentheses. It can be said with 95 percent certainty that the reading proficiency of the population of interest is in the interval of the estimated average $\pm$ 2 standard errors.

Mothers' Education. Table 2 showed that, in general, mothers who work outside the home have higher levels of education. Table 5 presents the reading proficiency of students with mothers working outside the home and not working outside the home by their mothers' level of education.

TABLE 5. Reading Proficiency of Students with Mothers Working/Not Working Outside the Home by Mother's Level of Education *

Work Status	No High School Diploma	Graduated High School	Some Post-High School
GRADE 4			
Mothers Working Outside the Home	206 (1.2)	219 (1.3)	229 (1.3)
Mothers Not Working Outside the Home	202 (1.9)	217 (1.2)	227 (1.6)
GRADE 8			
Mothers Working Outside the Home	250 (1.0)	260 (0.8)	272 (0.8)
Mothers Not Working Outside the Home	247 (1.0)	261 (0.7)	274 (1.6)
GRADE 11			
Mothers Working Outside the Home	275 (1.4)	287 (0.9)	301 (1.2)
Mothers Not Working Outside the Home	273 (1.6)	288 (1.2)	303 (1.5)

* Reading proficiency is reported using a scale that ranges from 0 to 500. Standard errors are presented in parentheses. It can be said with 95 percent certainty that the reading proficiency of the population of interest is in the interval of the estimated average $\pm$ 2 standard errors.

The patterns of reading performance for students whose mothers work or do not work outside the home is more complex when mothers level of education is taken into account. In some cases the reading performance of students whose mothers work outside the home is higher than the performance of students whose mothers do not work outside the home. In other cases the opposite is true.

The differences in performance are not statistically significant except in one instance, at grade 8 for students whose mothers have not graduated from high school.

How Many Students Reported Early Education?

Students were asked if they attended each of the following: kindergarten, nursery school, and day care programs. About 10 percent of the students had difficulty with the last two questions; they did not know if they had attended nursery school or day care programs.

Most students attended kindergarten--85 percent of fourth-graders, 92 percent of eighth-graders, and 90 percent of eleventh-graders. Table 6 presents percentages of students who reported attending kindergarten, nursery school, and day care programs.

TABLE 6. Percentage of Students Who Attended Kindergarten, Nursery School, and Day Care Programs

Grade	Attended Kindergarten	Attended Nursery School	Attended Day Care
4	85	45	28
8	92	41	23
11	90	34	19

Fewer students reported attending nursery school (34 to 45 percent) than kindergarten, and even fewer (19 to 28 percent) reported attending day care programs. For nursery school and day care programs, the percentage of

students who attended decreases by grade level. More students in grade 4 reported attending nursery school and day care than students in grades 8, and more grade 8 students reported attending these programs than grade 11 students.

Performance. At all three grade levels, students who attended kindergarten are better readers than those who did not (Table 7). This holds true for students who attended nursery school. However, there is no clear pattern in the relationship between day care attendance and reading performance.

TABLE 7. Reading Proficiency of Students Who Attended and Did Not Attend Kindergarten, Nursery School, and/or Day Care Programs *

Attendance	Kindergarten	Nursery School	Day Care
GRADE 4			
Attended	227 (1.0)	230 (1.7)	222 (2.4)
Did Not Attend	204 (3.5)	219 (1.8)	225 (1.5)
GRADE 8			
Attended	261 (1.0)	269 (1.5)	265 (2.6)
Did Not Attend	252 (3.8)	256 (1.5)	260 (1.3)
GRADE 11			
Attended	291 (1.3)	300 (2.1)	288 (2.9)
Did Not Attend	272 (3.3)	285 (1.3)	290 (1.2)

* Reading proficiency is reported using a scale that ranges from 0 to 500. Standard errors are presented in parentheses. It can be said with 95 percent certainty that the reading proficiency of the population of interest is in the interval of the estimated average $\pm$ 2 standard errors.

These results are important in relation to the data about mothers who work outside the home because these women are more likely to make use of nursery schools and day care programs. More students whose mothers work outside the home reported attending nursery school and/or day care programs (Table 8).

TABLE 8. Percentage of Students Who Attended Nursery School and Day Care by Mothers Working and Not Working Outside the Home

Work Status	Attended Nursery School	Attended Day Care
GRADE 4		
Mothers working outside the home	49	32
Mothers not working outside the home	41	22
GRADE 8		
Mothers working outside the home	44	28
Mothers not working outside the home	34	15
GRADE 11		
Mothers working outside the home	39	22
Mothers not working outside the home	26	13

CONCLUSIONS

NAEP data show that children whose mothers work outside the home read better than children whose mothers do not work outside the home, but the difference is small. Other factors affect the reading performance of students, including mother's level of education, amount of household income, and early education.

Children of Working Parents: Experiences and Outcomes (Hayes & Kamerman, 1983), the report by the Panel on Work, Family, and Community of the National Academy of Sciences found that

> ...there are few differences in children's patterns of daily activity--the things they do, the places they go, and the people with whom they interact--that can be attributed directly and solely to their mother's employment, except that working mothers and their children spend less time together (but not necessarily less time actively involved in shared activities). The major factors influencing children's activities and associations, especially those of school-age children, appear to be such factors as race, income, family structure, and urban/suburban/rural residence--and not mother's work. Indeed, we draw attention to the striking similarity among the daily experiences of children with working and nonworking mothers. A growing number of children, regardless of their mothers' employment status, for example, are enrolled in preprimary education programs and after-school enrichment programs. It seems likely that although growing up in the 1980s may be different than it was a decade or two ago, there is less difference today in the experience of children with working and nonworking mothers than one might expect. (p. 222)

The NAEP findings appear to be consistent with previous research studies that attempt to determine if mothers' working outside the home affects the achievement of their children.

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